

Satellites to the Rescue!

A ship on the ocean is swamped by a giant wave. A small airplane loses power and crash lands on a mountain field. A snowmobiler in Alaska breaks a tread and is lost far from civilization. How do the brave people who rescue folks in peril find out where they are?

Search and Rescue Satellite-Aided Tracking (SARSAT) uses two types of satellites to help people (and their pets!). Geostationary Operational Environmental Satellites (GOES) fly in place. They never stray from their spots above the Earth. Polar Orbiting Environmental Satellites (POES) are in constant motion. They orbit the Earth several times a day. The main job of these spacecraft is to track environmental conditions around the world. But GOES and POES also hear special distress signals from ships, planes and individuals. The satellites send the information to a control center in Suitland, Maryland. The National Oceanic and Atmospheric Administration (NOAA) operates the center. NOAA learns who's in danger, and where the emergency is. Then the agency contacts the Coast Guard or the Air Force, to head out to save the day!

Ships, airplanes and people use different kinds of equipment to transmit emergency signals. All of these devices broadcast distress messages to GOES and POES. Personal Locator Beacons (PLBs) are available only in Alaska, but soon may be sold in the rest of the United States. Backpackers and others who travel to remote areas could carry PLBs in case they get into trouble.

NASA built the satellites used for SARSAT and NOAA operates them. SARSAT has helped to locate and rescue more than 12,800 people worldwide and 4,300 people in the United States. Not included in those numbers are dogs and other pets that were traveling with their families when disaster struck. The Air Force and Coast Guard rescued animals, too!

Check out The Space Place Web site, especially http://spaceplace.nasa.gov/goes/goes_poes_orbits.htm, to learn about how these satellites orbit Earth and how GOES can hang over one spot all the time!

This article was written by Eric Elkins and provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

